# Government of Madras.

## PUBLIC WORKS DEPARTMENT.

IRRIGATION.
ACCOUNT.

| | | |
|---|---|---|
| *Recd.* | 1916. | *Enclosures* |
| *Regd.* | | *Spare copies* |

## G.O. No. 238 I., 29th May 1916

N. P.

### Foot-bridge

Sanctioning, with remarks, an estimate amounting to Rs. 1,050 for the construction of a — across the Palayam channel, Tinnevelly district, for execution by the Public Works Department as a contribution work.

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No. 238 I., 29TH MAY 1916

GOVERNMENT OF MADRAS

PUBLIC WORKS DEPARTMENT

**Irrigation.**
**Account.**

READ—the following papers:—

I

*Letter*—from M.R.Ry. Rao Bahadur L. D. VENKATARAMA AYYAR Avargal, B.A., B.C.E., Superintending Engineer, VI Circle.
*To*—the Chief Engineer for Irrigation.
*Dated*—Trichinopoly, the 6th May 1916.
*No.*—738-C.E.

I have the honour to forward herewith for your early approval two estimates, one amounting to Rs. 1,025 for constructing a foot-bridge across the Palayam channel in place of the fallen one and the other for Rs. 325 for constructing a bathing ghat and retaining wall on its left side proposed to be carried out as full contribution works.

2. Copy of the Municipal Chairman's letter No. 388, dated 4th April 1914, herewith forwarded explains the necessity for the works under reference.

3. The estimates have been forwarded to you for approval with reference to the orders contained in G.O. No. 330 I., dated 24th October 1911.

4. As the foot-bridge is wanted very badly by the Municipal Council and as it is to be constructed in place of the fallen one, I have in anticipation of your approval permitted the Executive Engineer, Tinnevelly division, to carry out the said work during this closure. The Executive Engineer has been asked to collect the full contribution amount from the Municipal Council before starting the work and to take a written statement from that body that the works will after completion become the property of Government.

ENCLOSURE.

*Letter*—from the Chairman, Municipal Council, Palamcottah.
*To*—the Executive Engineer, Tinnevelly.
*Dated*—the 4th April 1914.
*No.*—388.

In submitting herewith the estimates noted below for favour of granting permission for executing them I have the honour to state as follows.

2. *Estimate for constructing a foot-bridge over Palayam channel near Kulavanikapuram village.*—The residents of Kulavanikapuram represented to me on 12th December 1913, that the foot bridge that was in existence over the Palayam channel near Kulavanikapuram village had been washed away recently by a flood in the channel, that they found it very difficult to pass over the channel to the other side of it and that a bridge should be constructed for their use. An estimate has therefore been prepared for constructing a bridge over the Palayam channel and the work will be undertaken as soon as your sanction is obtained.

3. A bridge at that spot is very necessary and the Council has in its current year's budget provided for its construction. The residents of the village have also agreed to contribute half of the cost, a fact which affords such strong evidence that the people do keenly feel the want of a bridge.

4. *Estimate for constructing a bathing ghat on the southern side of the Kuttymoopen street.*—This work is not one which can be expected in any considerable manner to impede the flow of water down the channel and will not interfere with any agricultural interest. The grievance of the people of the neighbourhood seems real and to redress it the Council has sanctioned the construction of a flight of steps at the spot mentioned above. An estimate for this work has been prepared and is sent herewith.

5. As both these works have to be completed before you allow water down the Palayam channel, I have the honour to request that you will be so good as to treat this communication as urgent and pass early orders.

(2)

*Report to accompany the estimate for constructing a bridge across the Palayam channel between 11/2 and 11/3 miles.*

| | RS. |
|---|---|
| Amount of estimate ... ... ... ... ... ... | 1,025 |

This estimate has been prepared at the request of the Chairman, Municipal Council, Palamcottah, in his letter No. 388, dated 4th April 1914, and provides for the erection of a new bridge in place of a fallen one in Kulavanikapuram village. The bridge will be erected as per plan accompanying. A roadway of 9 feet clear between parapets has been allowed as carts also are likely to pass over the bridge occasionally during dry season to take manure to the fields.

The usual width of the channel in this reach is 42 feet and the same is now allowed—vide also calculations enclosed.

The work will be carried out as per standard specification of the department and the rates are supported by data.

*3rd May 1916.*

L. D. VENKATARAMA AYYAR,
*Superintending Engineer, VI Circle.*

(3)

*Report to accompany the estimate for constructing a bathing ghat and a retaining wall in Palayam channel.*

| | RS. |
|---|---|
| Estimate ... ... ... ... ... ... ... ... | 325 |

The estimate provides for constructing a bathing ghat and a retaining wall opposite to Kuttymoopen street in Melapalaiyam village. This has been prepared at the request of the Municipal Chairman, Palamcottah—(vide copy enclosed). As there is a width of 48 feet in the channel at the site of proposed construction of the bathing ghat against 42 feet of width required (which is generally maintained in this reach) there is no obstruction of water flow down the channel. The estimate may kindly be sanctioned.

*3rd May 1916.*

L. D. VENKATARAMA AYYAR,
*Superintending Engineer, VI Circle.*

II

**Memorandum No. 3605/16–1, dated 15th May 1916.**

With reference to letter No. 738-C.E., dated 6th May 1916, from the Superintending Engineer, VI Circle, submitting estimates for constructing a foot-bridge across and a bathing ghat in the Palayam channel, Tinnevelly district, the Chief Engineer for Irrigation has the honour to observe that the consent of the Municipal Council to the construction of the works has not been obtained. He is requested to obtain the consent of that body and also to arrange for the deposit of the contribution in full before the works are started.

(By Order)

F. E. MORGAN,
*Assistant Chief Engineer for Irrigation.*

To the Superintending Engineer, VI Circle.

III

**Note by the Chief Engineer for Irrigation, No. 3605/16–2, dated 24th May 1916.**

With his letter first read above, the Superintending Engineer, VI Circle, forwards two estimates, one amounting to Rs. 1,025 for constructing a foot-bridge across the Palayam channel, Tinnevelly district, and the other amounting to Rs. 325 for a bathing ghat and a retaining wall therein to be carried out as full contribution works. In Memorandum No. 3605/16-B-1, dated 15th May 1916, the Superintending Engineer was requested to obtain the consent of the Municipal Council, Palamcottah, to the construction of the works and also to arrange for the deposit of the contribution in full before the works were started.

2. The estimate for the construction of the foot-bridge has been raised to Rupees 1,050 in this office and is recommended for sanction and that for the bathing ghat and retaining wall is being separately dealt with; the Superintending Engineer has been asked to furnish a site plan or dimensioned sketch showing the positions of the works.

3. The action of the Superintending Engineer in having authorised the Executive Engineer to proceed with the work in anticipation of sanction to the estimate provided the amount thereof is placed in full by the Municipality to the credit of the Public Works Department may be approved.

4. It is observed that the design for the bridge was made twenty-two months ago and that the preparation of these estimates now represented as so very urgent that work has been started in anticipation of sanction, was asked for by the Municipal Chairman on 4th April 1914. The Superintending Engineer may be requested to explain the great delay that has occurred in dealing with the case.

W. M. ELLIS, Col., R.E.,
*Chief Engineer for Irrigation.*

To the Secretary to Government, Public Works Department (Irrigation).

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**Order—No. 238 I., dated 29th May 1916.**

The recommendations of the Chief Engineer for Irrigation are approved and the estimate amounting to Rs. 1,035 for "works" or Rs. 1,050 inclusive of charges for tools and plant for the construction of a foot-bridge across the Palayam channel between 11/2 and 11/3 miles, Tinnevelly district, is sanctioned, subject to the understanding that the work on completion will become the property of Government and that the cost of construction is contributed in full by the Palamcottah Municipality who will also defray the cost of maintenance. The Superintending Engineer will get a statement from the Chairman, Municipal Council, accepting these conditions.

2. The sanction accorded in paragraph 1 above is registered as No. 23 I. of 1916–17.

3. The percentage charges for establishment will be waived with reference to G.O. No. 593 W., dated 9th May 1908.

4. The attention of the Superintending Engineer is drawn to paragraph 4 of the Note by the Chief Engineer for Irrigation.

(True Extract)

W. M. ELLIS, Col., R.E.,
*Secretary to Government, P. W. D.*
*(Irrigation Branch).*

To the Superintending Engineer, VI Circle, with plans and estimate.
„ Accountant-General, Madras.
„ Local and Municipal Department.

Forwarded to the

(By Order)

*Manager.*

PUBLIC WORKS DEPARTMENT
(IRRIGATION BRANCH).

NOTES CONNECTED WITH G.O. No. 238 I., DATED 29TH MAY 1916.

[SUBJECT.—*Estimates for two works in the Palayam channel, Tinnevelly Division—*
*(i) Constructing a foot-bridge across the channel, Rs.* 1,025 ;
*(ii) a bathing ghat in the channel, Rs.* 325 ]

*From the Superintending Engineer, VI Circle, dated 6th May* 1916, *No.* 738/*C.E.*

Submitted.

2. The estimates seem to have been prepared on the requisition of the Municipal Chairman and no orders of the Local Board acquiescing in the proposals are quoted.

In paragraph 4 of the Superintending Engineer's letter it is stated that orders have been issued to the Executive Engineer to proceed with the work of the foot-bridge (estimate Rs. 1,025) during the current closure season of the channel as the bridge is very badly wanted by the Municipal Council.

For orders whether the two estimates may be checked for sanction of Government.

M.R.A.—10-5-16.
M.S.V.—10-5-16.

F. E. MORGAN—11-5-16.

The estimate may be checked urgently. The Superintending Engineer to be asked to obtain the sanction of the Municipal Council as well as a deposit of the full contribution before starting the work.

2. It is noted that the design forwarded for the bridge was made 22 months ago and the preparation of these estimates now represented so very urgent that work has been started in anticipation of sanction was asked for by the Municipal Chairman on 4th April 1914. When finally dealing with the estimates an explanation for the great delay must be asked.

W. M. ELLIS—12-5-16.

A draft memorandum to the Superintending Engineer is submitted for approval. After issue the estimate will be checked in Technical section.

G.V.—12-5-16.

F.E.M.—12-5-16.

[Memorandum to the Superintending Engineer, VI Circle, issued as No. 3605/16 B-1, dated 15th May 1916.]

The estimate has been checked and it provides for—

(1) Constructing a bridge across the Palayam channel in the limits of Kulavanikapuram village in place of a fallen one.

(2) Constructing a bathing ghat and a retaining wall on the left side of the bridge opposite to Kuttymoopen street in Melapalaiyam village.

*Item No.* 1.—The hydraulic details have been checked and the waterway allowed appears suitable. As the soil at the site is reported to be soft rock and the sub-soil hard rock at + 24·00, the foundation of the walls as proposed to be taken down to + 24·00, may be accepted.

*Covering stone.*—Thickness of stone provided in the estimate is $7\frac{1}{2}''$ which appears suitable—vide calculation attached. However, it is, for consideration, whether reinforced concrete slab 6" may be substituted though it would cost a little more for the reason that reinforced concrete slabs could be speedily made and erected at site straightaway. The excess will be about Rs. 200 on this account: otherwise the design appears suitable and may be accepted.

Might be left as proposed in estimate.
F.E.M.—22-5-16.
W.M.E.—24-5-16.

If so it would be 20 feet long, whereas it is 80 feet long which is more than length of parapet, side walls and length at bottom step. It is also plastered. I cannot make it out.
F.E.M.—22-5-16.

*Item* 2. *Bathing ghat and retaining wall.*—The position of retaining wall has not been shown on the plan. Probably the wall is to run parallel to the top wall.

*Rates.*—These are supported by data and agree with the current schedule of rates.

*Unforeseen.*—A sum of Rs. 5 only has been allowed for unforeseen works in the case of bridge estimate which appears inadequate. It may be raised to Rs. 25.

For orders.

N.L.R.—20-5-16.

T.R.N.—20-5-16.

F. E. MORGAN—22-5-16.

*Calculations for granite stone slab.*

Consider 1 foot width of slab. Assuming that a loaded cart weighs 3 tons, load on each wheel base is $1\frac{1}{2}$ tons. Considering that this $1\frac{1}{2}$ tons act at the centre of the slab, the equivalent distributed load over the whole slab will be 3 tons.

| | | LBS. |
|---|---|---|
| Therefore the live load per square foot is ... ... | $\frac{3 \times 2,240}{7} =$ | 960 |
| Weight of gravel on one square foot $1 \times \frac{1}{2} \times 120$ ... ... ... | | 60 |
| Add for extra live load ... ... ... ... ... ... ... | | 80 |
| Total distributed load on the slab ... | | 1,100 |

From page 924 of Trautwine slab 7 feet long, 1" wide and $7\frac{1}{2}''$ thick will bear a safe central load of 77·5 lbs. or 155 lbs. distributed.

A slab 1 foot wide, will bear $12 \times 155 = 1,860$ lbs.

As the total load coming on the bridge is computed at 1,100, the thickness of slab $7\frac{1}{2}''$ appears suitable.

N.L.R.—20-5-16.

The bridge may be sanctioned.

2. The *bathing ghat and retaining wall*:—

**A** | Ask for site plan or dimensioned sketch plan showing position.

W. M. ELLIS—22-5-16.

A draft note by the Chief Engineer for Irrigation and a draft order thereon are submitted for approval and may be sent to Local and Municipal for acceptance before issue.

T.K.G.—23-5-16.

2. With reference to the Chief Engineer for Irrigation's note at **A** above, a draft memorandum to the Superintending Engineer is put up in linked file.

G.V.—23-5-16.

F.E.M.—24-5-16.
W.M.E.—24-5-16.

*To the Local and Municipal Department u.o.*

LOCAL AND MUNICIPAL DEPARTMENT.

As the Chairman states that the Council has provided for the cost of the work one-half being borne by the public it is for consideration whether the draft order may be accepted in this department. Please see also paragraph 2 of the draft.

T.B.R.—24-5-16.

The draft may be accepted.

V. T. KRISHNAMA ACHARI—24-5-16.

Local and Municipal accept the proposals as far as the bridge goes. As regards the bathing ghat, the Sanitary Board have recently asked the Municipal Council whether it would not be well to fence the channel throughout municipal limits as it is badly contaminated and mainly responsible for the annual visitation of cholera. It would be well to await the disposal of this question before sanctioning the estimate for the bathing ghat.

C. G. TODHUNTER—24-5-16.

*To the Public Works Department (Irrigation) u.o.*

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PUBLIC WORKS DEPARTMENT
(IRRIGATION BRANCH).

The draft order may, if approved, now issue.

2. The estimate for the bathing ghat is being returned to the Superintending Engineer for resubmission with a site plan or a dimensioned sketch showing the position of the works. From the Superintending Engineer's letter No. 738 C.E., dated 6th May 1916, it is observed that only the bridge work has been started in anticipation of sanction to the estimate. It is for consideration whether, with reference to the remarks of the Local and Municipal Secretary above, a paragraph may be added to the draft memorandum in the linked file as follows :—

"It is understood that the Sanitary Board have asked the Municipal Council whether it would not be well to fence the channel throughout the municipal limits as it is badly contaminated and mainly responsible for the annual visitation of cholera in the town. The estimate will be considered after the receipt of this report."

G.V.—25-5-16.

F. E. MORGAN—25-5-16.
W. M. ELLIS—25-5-16.

[G.O. No. 238 I., dated 29th May 1916.]

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G.F. 19 (a)—1-14

9



L.1-6cf From the SE VI circle no 738CE dt 6.5.16.

L.7cf Memo to SE VI no 3605/16B1 dt 15.5.16.

Note by the Chief Engineer for Irrigation no 3605/16-V dt

—

L.1-6cf With his letter first read above, the Supdg. Engr VI circle forwards two estimates, (one amounting to Rs 1025/- for constructing a foot bridge across the Palayam channel Tinnevelly district, & the other amounting to Rs 325 for a bathing ghat and a retaining wall therein to be carried out as full contribution works. In memo

L.7cf no 3605/16B1 dt 15.5.16, the Supdg. Engr was requested to obtain the consent of the municipal council (Palamcottah) to the construction of the works and also to arrange for the deposit of the contribution in full before the works were started.

2. The estimate for the

9

Construction of the foot bridge (has been raised to 1050 in this office &) is recommended for sanction and that for the bathing ghat & retaining wall (is being separately dealt with;) the SE has been asked to furnish a siteplan or dimensioned sketch showing the position of the works.

3 The action of the SE in having authorised the EE to proceed with the work in anticipation of sanction to the estimate provided the amount thereof is placed in full by the Municipality to the credit of the P.W.D, may be approved

4 (?) It is observed that the design for the bridge was made twentytwo months ago and that the preparation of these estimates now represented (as) so very urgent that work has been started in anticipation of sanction, was asked for by the municipal chairman on 4.4.14. The Supg. Engr (may be) requested to explain the (great) delay that has occurred in dealing with the case.

DE1 11/5/14

[illegible] 24/5/16 SE

To
The Secretary to Govt
P.W.D. DE1

23/5/16

[illegible]

Secti. II—10 (b)—2-16. P.W.D. Irrigati DEPARTMENT.

1180

Foot bridge.

Sanctioning with remarks an estimate amounting to Rs 1,050 for the construction of a --- across the Palayam channel, Tinnevelly dt. for execution by the P.W.D. as a contribution work.

Bridge
Contribution works

READ AGAIN G.O. No. ........, dated ........ 191 .

" " " " ........, " ........ 191 .

*READ ALSO:—*

C. No. 3605/16.13, From the Chief Engineer for Irrigation, No. 3605/16.2, dated May 1916 191

" " ........, " " ........, " ........, " ........ 191

" " ........, " " ........, " ........, " ........ 191

**ORDER.** No. 238 I, dated 25. 5. 1916

Press

The recommendations of the Chief - Engineer for Irrigation are approved a[nd] the estimate amounting to Rs 1,035 for 'Works' or Rs 1,050 inclusive of charge[s] for Tools and plant for the construct[ion] of a foot-bridge across the Palayam -- channel between 11/2 and 11/3 miles, - Tinnevelly district is sanctioned, ~~the amount thereof being~~ contributed in ful[l] by the Palamcottah Municipality who will also defray the cost of maintenance.

Subject to the understanding that the work on completion will become the property of Government and that the cost of construction is

2. The sanction accorded in para 1 ab[ove] is registered as No. 23 of 1916-17.

~~3. The work on completion will become the property of Government and will be maintained from the funds of the Municipal council~~ The S.E. will get a stat[e]ment from the Chairman, Municipal Coun[cil] accepting these conditions.

subject to approval
25/5

10P

Not put up

p 10 CF

3 ~~1~~. The percentage charges for Establishment will be waived with reference to No. 593 W dated 9th May 1908.

4 ~~5~~. The attention of the Supg. Engineer is drawn to para 4 of the Note by the Chief Engineer for Irrigation.

[illegible]
23.5.16

[signature] 23/5/16

1. Plan of foot bridge
1. Estimate for do in 6 sheets including report etc. }.

To the S.E. VI Circle. with plans and estimate
,, Accountant General, Madras } [illegible] /5

Local and Municipal department.

Not ET

Print Notes

[ call in para 4 to be noted ]

[illegible] 29/5

30/5
as above & a separate by T [illegible].

AD
[illegible] 29/5

[illegible]
C.S. [illegible]

20